**From:** Liverman, Earl
**Sent:** Thursday, June 12, 2014 1:16 PM
**To:** John M. Herzog
**Subject:** RE: Avery Landing Natural Attenuation Monitoring Update

Thank you for your clear and concise summary.

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**From:** John M. Herzog [mailto:jherzog@geoengineers.com]
**Sent:** Thursday, June 12, 2014 1:04 PM
**To:** Liverman, Earl
**Cc:** Terry Cundy; Robert S. Trahan; sghall@ene.com
**Subject:** Avery Landing Natural Attenuation Monitoring Update

Earl,

I wanted to provide you a summary of the initial Natural Attenuation Performance Monitoring Results for Avery Landing.

In accordance with the Natural Attenuation Performance Groundwater Monitoring Plan, a total of three monitoring wells (MW-101 through MW-103) were installed on May 6, 2014 at the locations shown on the attached figure (Figure 1). In addition, existing monitoring wells GA-2 and GA-3 (see Figure 2) were decommissioned by a well driller licensed in the State of Idaho as described in the Work Plan. Well construction details are summarized in Table 1 (attached). Monitoring well identification tags and well coordinates are summarized in Table 2 (attached).

Following well installation activities, monitoring wells MW-101 through MW-103 were developed to stabilize the filter pack and formation materials surrounding the well screen, and restore the hydraulic connection between the well screen and the surrounding soil. Well development activities continued to reduce the turbidity content of the water to approximately 25 NTUs. A total of 40 gallons of water were generated as a result of the well development activities. Well development water was placed in a sealed and labeled 55-gallon drum that is being temporarily stored at the Site.

On May 8, 2014, groundwater samples were collected from monitoring wells EMW-01 and MW-101 through MW-103 using low-flow/low-turbidity sampling techniques. Prior to sampling, depth to water levels were measured from the top of casing using an electric water level indicator (e-tape). Wells were purged at a rate not exceeding 0.5 liters per minute using a peristaltic pump until water quality parameters (EC, DO, pH, TDS, ORP, turbidity and temp) stabilized to within 10% on three consecutive readings. Purge water generated during the sampling activities was placed in a sealed and labeled 55-gallon drum that is being temporarily stored at the Site. Measured groundwater elevations at the time of sampling as well as stabilized groundwater parameters are summarized in Tables 3 and 4, respectfully.

Groundwater samples obtained from the Site were transported to Analytical Resources Inc. (ARI) of Tukwila, Washington for chemical analysis of petroleum hydrocarbons, VOCs, SVOCs and PCBs in accordance with the Work Plan. Validated chemical

analytical results for these samples are summarized in Table 5 (attached). Based on a review of the data, groundwater conditions down gradient of the removal action area are below the benchmark concentrations established for the Site.

We will include this information in the report at the end of the four rounds of monitoring.

Currently, we are planning to perform the second round of monitoring in early October to evaluate groundwater conditions during the seasonally low water level. We will coordinate the second round of monitoring as the end of the summer draws nearer.

Let me know if you have any questions.

Thank you